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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
08/877,684	06/17/1997	GEORGE ALAN VAUGHAN	96B035/2	6303

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EXXONMOBIL CHEMICAL COMPANY  
P O BOX 2149  
BAYTOWN, TX 77522-2149

EXAMINER

PASTERCZYK, JAMES W

ART UNIT	PAPER NUMBER
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1755

DATE MAILED: 08/05/2003

44

Please find below and/or attached an Office communication concerning this application or proceeding.

AS-44

# Office Action Summary

Application No.

08/877,684

Applicant(s)

Vaughan et al.

Examiner

J. Pasterczyk

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on Jul 16, 2003
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1, 6, 13, 17-20, 22-27, 30, 33, 35, 36, and 39-120 is/are pending in the application.
- 4a) Of the above, claim(s) 22-27, 75-95, and 101-117 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 6, 13, 17-20, 30, 33, 35, 36, 39-74, 96-100, and 118-120 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☒ Claims 1, 6, 13, 17-20, 22-27, 30, 33, 35, 36, and 39-120 are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some\* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\*See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). \_\_\_\_\_ 6) ☐ Other:

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1. This Office action is in response to the RCE filed 7/16/03 and refers to the rejection mailed 4/16/03.

2. Applicants' RCE papers requested entry of the papers filed with the after final amendment of 6/9/03. The examiner first notes that the marked up copy of claims 1-40 contains numerous examples of amendments that had already been made and entered. Such errors in form of amendment could easily lead to problems in interpretation of the prosecution history of the case if the case were to go into litigation. Second, no claim 96 was ever presented, hence under Rule 126 the claims applicants numbered 97-121 are hereby numbered 96-120 and will henceforth be referred to as such. Applicants are requested to make notations in their own copies of the claims of this fact.

3. Newly submitted claims 101-117 and 75-95 are directed to an invention that is independent or distinct from the invention originally claimed for the following reasons: the process as claimed can be practiced with another materially different composition, such as a metallocene or Ziegler-Natta catalyst.

Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claims 75-95 and 101-117 are withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03. Claims 22-27 are also withdrawn from consideration due to an earlier restriction requirement.

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4. Claims 6, 17-20, 30, 33, 35, 36, 39-42, 100 and 118-120 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Claim 6 has been amended to add the negative limitation "provided that the activator is not a group 15 halide salt". This negative limitation is not specifically supported in the specification as originally filed, and hence violates the holding of *Ex parte Grasselli*, 231 USPQ 393. ✓

5. Claims 1, 6, 13, 17-20, 30, 33, 35, 36, 39-74, 96-100 and 118-120 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 1, III), "said late transition metal connected to said bidentate ligand" strictly lacks antecedent basis since it is recited earlier in the claim as a "transition metal catalyst system" and a "Group-9, -10 or -11 metal connected to a bidentate ligand" which is narrower. Claims 6 and 13 also have this problem. Further, claim 13 recites a "transition metal catalyst", but then includes other reagents. C.f. next paragraph.

In claim 17, "The catalyst system" of the first line lacks antecedent basis in claim 13 since claim 13 recites a "transition metal catalyst". Claim 19 also has this problem. These would all be solved by making claim 13 read a "transition metal catalyst system".

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In claims 20 and 39, “catalyst precursor” lacks antecedent basis since the independent claims all recite the transition metal component as a metal connected to a bidentate ligand, not as a precursor.

In claim 42, l. 1, change “a” to --the--, and “transition metal compound” and “noncoordinating anion precursor” both lack antecedent basis.

In claim 33 insert --solid-- before “support” for proper antecedent basis.

In claims 43, fourth line from the end, with the meaning of “covalent bonding” as now defined by applicants, it is not clear what “depending on the valency of E” means. This is also found in the second from last line of claim 51 and fourth from last line of claim 63.

In claim 45, “noncoordinating-anion” lacks antecedent basis.

Claims 44-50, 96-99 and 118-120 should all recite a catalyst composition instead of system or compound, since that is what is claimed in claim 43. Similar problems exist in the claims depending from claims 51 and 63.

In claim 49, first line after the structures, “especially” makes the clause read as if a range within a range is being claimed, which is improper. In the third line change both instances of “and” to --or--, and in the next line delete “may”. These problems all also exist in claims 61 and 73.

In claims 50, 62 and 74, first line, insert a comma before “p” at the end of the line.

In claim 59, “catalyst compound” lacks antecedent basis since it is recited as a transition metal compound in claim 51 from which it depends.

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In claim 67, it is not clear what the counterion might be.

In claims 69 and 71, "catalyst compound" lacks antecedent basis.

In claim 99, "catalyst compound" lacks antecedent basis, and no counterion is recited for the boron anion.

In claims 118-120, insert --or-- before "63" in the first line. Also, "transition metal compound" lacks antecedent basis in claims 1, 6 and 13.

6. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

7. Claims 1, 6, 13, 17-20, 30, 33, 35, 36, 39-74, 96-100 and 118-120 are rejected under 35 U.S.C. 102(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Brookhart as cited in paragraph 5 of the previous full Office action.

8. Claims 1, 6, 13, 17-20, 30, 33, 35, 36, 39-74, 96-100 and 118-120 are rejected under 35 U.S.C. 103(a) as being unpatentable over either of Johnson or Drent in view of Brookhart as cited in and for the reasons of record given in paragraph 6 of the previous full Office action.

9. Applicant's arguments filed 6/11/03 have been fully considered but they are not persuasive.

Regarding applicants' arguments about claim 1, the claims are not commensurate in scope with the argument since the support is not inactive as applicants argue. Likewise with claim 13 and its dependents. Claim 6 and its dependents are rejected on new matter grounds, hence applicants' argument is moot. The notion of drying a finished supported catalyst is thoroughly

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conventional in the art of catalyst preparation, hence the limitation of “substantially free from solvent” is conventional. One of ordinary skill in the art would have been motivated by considerations of cost of use of these expensive catalysts to limit the amount of catalyst on a support, with the attendant benefit of producing polymers that are more useful industrially and commercially than those made in the first tentative experiments of Brookhart. One of ordinary skill in the art would also have known to adjust various parameters of the polymerization process, e.g. hydrogen level, monomer feed rate, temperature, all of which could reasonably be expected to affect the properties of the polymer made using the catalyst. Finally, supporting a catalyst, whether it be from Johnson or Brookhart, is conventional since supported catalysts are used in Union Carbide’s gas phase Unipol™ process as well as slurry processes of polymerization. Regarding Drent, this reference discloses a transition metal compound reading on that of the present claims, regardless of the intended use of it as a catalyst for a particular reaction, hence again applicants’ claims are not commensurate in scope with their argument. Also, the anions of the mineral acids of Drent are conventionally recognized as being non-coordinating, hence the limitation of “non-coordinating precursors” appears to be met.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to J. Pasterczyk whose telephone number is (703) 308-3497. The examiner can normally be reached on M-F from 9 to 5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Bell, can be reached on (703) 308-3823. The fax phone number for the organization where

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this application or proceeding is assigned is (703) 872-9310 for normal faxes, 872-9311 for after final faxes.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.



Mark L. Bell  
Supervisory Patent Examiner  
Technology Center 1700



J. Pasterczyk

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7/29/03